

CLAIMS:

1. A method of operating a data-processing device, particularly a chip card or smart card, with an integrated circuit comprising a central processing unit (CPU) and one or more co-processors, in which the integrated circuit performs cryptographic operations, characterized in that in performing a cryptographic operation in the integrated circuit, at least
5 two processors, CPU and co-processors, perform a cryptographic operation simultaneously and in parallel.
2. A method as claimed in claim 1, characterized in that only the cryptographic operation of one processor, CPU or co-processor, is a useful operation and all other
10 cryptographic operations are dummy operations whose results are rejected.
3. A method as claimed in claim 2, characterized in that the selection as to which processor, CPU or co-processor, performs a useful operation is random-controlled.
- 15 4. A method as claimed in any one of the preceding claims, characterized in that a cryptographic operation is split up into at least two sub-operations and in that at least two processors perform the sub-operations in parallel and simultaneously.
5. A method as claimed in claim 4, characterized in that, in the sense of current
20 consumption, a cryptographic operation is split up into two mutually complementary operations.
6. A method as claimed in claim 5, characterized in that the selection as to which processor performs the operation complementarily or not complementarily is random-
25 controlled.
7. A method as claimed in claim 1, characterized in that a cryptographic operation is split up into at least two sub-operations, and the sub-operations are performed simultaneously and in parallel by the processors, CPU and co-processors, while subsequently

corresponding sub-results are combined to an overall result of the overall cryptographic operation.

8. A method as claimed in claim 7, characterized in that the split-up of the cryptographic operation into sub-operations is random-controlled.

9. A method as claimed in claim 7 or 8, characterized in that the sub-operations are parts of an encryption in accordance with DES (Data Encryption Standard).

10. A data-processing device, particularly a chip card or smart card, particularly for performing a method as claimed in any one of the preceding claims, with an integrated circuit comprising a central processing unit (CPU) (10) and one or more co-processors (12), characterized in that the integrated circuit comprises a control unit (18, 30) which controls the processors, CPU (10) and co-processors (12) in such a way that, in the case of a cryptographic operation, at least two processors perform a cryptographic operation simultaneously and in parallel.

11. A data-processing device as claimed in claim 10, characterized in that the control unit comprises a splitter (18) which splits up a cryptographic operation into at least two sub-operations (20, 22) and supplies them for simultaneous processing to two separate processors of the integrated circuit, CPU (10) and co-processors (12).

12. A data-processing device as claimed in claim 11, characterized in that the control unit further comprises a recombiner (30) which recombines each sub-result (26, 28) of the sub-operations (20, 22) simultaneously performed by the processors (10, 12).

13. A data-processing device as claimed in claim 12, characterized in that the splitter (18) is formed in such a way that at least one sub-operation (20, 22) is a dummy operation and in that the recombiner (30) is formed in such a way that it rejects the relevant result (26, 28) of a processor (10, 12) that has performed a dummy operation.

14. A data-processing device as claimed in any one of claims 11 to 13, characterized in that the integrated circuit additionally comprises a random generator (24)

which is connected to the splitter (18) in such a way that it operates in a random-controlled manner.